

IN THE CLAIMS

Kindly replace claims 17-37 as follows. Claims which have not been amended appear simply in bold type.

17. (Twice Amended) Isolated monoclonal antibodies or their Fv, Fab, and F(ab')₂ fragments, which recognize an epitope of a bacterium of the species *T.*

equigenitalis, and which do not exhibit a crossed reaction with at least *K pneumoniae*,

Ps fluorescens, *St aureus*, *Str equi*, *P haemolytica*, *P multocida*, *Ps aeruginosa* and *Act equuli*.

18. (Twice Amended) Isolated monoclonal antibodies or their fragments, according to claim 17, which recognize *T. equigenitalis* proteins selected from the group consisting of *T. equigenitalis* proteins of 150 kDa, 120 kDa, 52.7 kDa and 22 (LPS) kDa.

19. (Twice Amended) Isolated monoclonal antibodies, which can be obtained from hybridomas by a method comprising:

fusing non-secreting murine myeloma cells with spleen cells from mice immunized against an inactivated strain of the species *T. equigenitalis* or extract(s) of such a strain,

cloning and selecting according to the capacity of their culture supernatant to recognize an epitope or epitopes of a bacterium of the species *T. equigenitalis*, and to not exhibit a crossed reaction with at least *K pneumoniae*, *Ps fluorescens*, *St aureus*, *Str equi*, *P haemolytica*, *P multocida*, *Ps aeruginosa* and *Act equuli*,

Sub
I-1
E2

recovering the required monoclonal antibodies, and
optionally purifying said monoclonal antibodies.

20. Immunogenic proteins, which are capable of interacting with monoclonal antibodies or their fragments according to claim 17.

21. Monoclonal anti-antibodies, and their Fv, Fab, and F(ab')₂ fragments, which are capable of interacting with the monoclonal antibodies or their fragments according to claim 17.

22. (Twice Amended) A method of obtaining monoclonal antibodies according to claim 17, comprising:

Sub
I-1
E3

fusing non-secreting murine myeloma cells with spleen cells from mice immunized by means of a strain of the species *T. equigenitalis* or extract(s) from such a strain,

screening hybridomas whose culture supernatants exhibit a positive reaction with a bacterium of the species *T. equigenitalis* or a fragment thereof,

selecting by cloning the hybridomas with respect to their reactivity, in relation to *T. equigenitalis*,

recovering the monoclonal antibodies, and
optionally purifying said monoclonal antibodies.

Sub
I-1

23. (Twice Amended) A method of obtaining monoclonal antibodies according to claim 21, comprising:

fusing non-secreting murine myeloma cells with spleen cells from mice immunized by means of monoclonal antibodies or their Fv, Fab, and F(ab')₂ fragments, which recognize an epitope of a bacterium of the species *T. equigenitalis*, and which do not exhibit a crossed reaction with at least *K pneumoniae*, *Ps fluorescens*, *St aureus*, *Str aqu*, *P haemolytica*, *P multocida*, *Ps aeruginosa* and *Act equuli*,

screening hybridomas whose culture supernatants exhibit a positive reaction with one of the said monoclonal antibodies or their fragments,

E-3

selecting by cloning the hybridomas, and

recovering the required anti-antibodies.

24. Strains of hybridomas, which are capable of secreting the monoclonal antibodies according to claim 17.

25. Strains of hybridomas, which are capable of secreting the monoclonal antibodies according to claim 21.

Sub
I-1

26. (Amended) A method of identification of a bacterium of the species *T. equigenitalis* in a specimen or in a culture comprising:

bringing the specimen or the culture to be analyzed, which may contain *T. equigenitalis*, into contact with an effective quantity of at least one monoclonal antibody or

Sub
I 1
F 2

Fv, Fab, or F(ab')₂ fragment thereof according to claim 17, under conditions permitting a reaction of the antigen-antibody type, and
detecting any product formed in a reaction of the antigen-antibody type.

27. A method of identification of a bacterium of the species *T. equigenitalis* in a specimen or in a culture comprising:
bringing the specimen or the culture to be analyzed which may contain *T. equigenitalis* into contact, under conditions permitting a reaction of the antigen-antibody type, with an effective quantity of a compound selected from the group consisting of an immunogenic protein and a monoclonal anti-antibody or Fv, Fab, and F(ab')₂ fragment thereof, wherein said protein and anti-antibody or fragment thereof are capable of interacting with monoclonal antibodies or their fragments according to claim 17, so as to detect the presence of antibodies directed against *T. equigenitalis*, and
detecting any product formed in a reaction of the antigen-antibody type.

28. Method of diagnosis of an infection by *T. equigenitalis* comprising:
bringing one or more monoclonal antibodies according to claim 17 or their fragments, into contact with a biological sample, and
detecting the reaction of the antigen-antibody type which is produced when *T. equigenitalis* is present in the sample.

29. The method according to claim 26, further comprising blocking the non antigen-antibody reactions.

Sub
I 4

30. (Twice Amended) Kits for application of a method of identification of a bacterium of the species *T. equigenitalis* in a specimen or in a culture, which include:

at least one compound selected from the group consisting of a monoclonal antibody or fragment according to claim 17, an immunogenic protein and a monoclonal anti-antibody or fragment thereof are capable of interacting with said monoclonal antibody or fragment thereof,

ES

reagents, for detecting the intended immunologic reaction,

optionally, reagents for blocking the non antigen-antibody reactions, and

instructions for use.

31. Pharmaceutical compositions comprising at one least one monoclonal antibody or fragment according to claim 17, in combination with a pharmaceutically inert vehicle.

32. Vaccinal compositions comprising at least one compound selected from the group consisting of an immunogenic protein and a monoclonal anti-antibody or Fv, Fab, and F(ab')₂ fragment thereof, wherein said protein and anti-antibody or fragment thereof are capable of interacting with monoclonal antibodies or their

fragments according to claim 17, in combination with physiologically acceptable excipients, in a quantity sufficient for evoking an immune response.

33. Kits according to claim 30, wherein said reagent for carrying out the intended immunologic reaction is selected from the group consisting of markers and buffers.

34. Kits according to claim 30, wherein reagents for blocking the non antigenic-antibody reaction is included and said reagent is mouse serum.

35. (Twice Amended) The method according to claim 29, wherein the non antigen-antibody reaction is blocked by saturation of the specimen obtained by means of a serum from which anti-*T. equigenitalis* antibodies have been removed.

Ex 6
Sub
1.1

36. The method according to claim 27, further comprising blocking the non antigen-antibody reactions.

37. The method according to claim 28, further comprising blocking the non antigen-antibody reactions.

38. A method of obtaining a protein selected from the group consisting of *T. equigenitalis* immunogenic proteins and *T. equigenitalis* anti-antibodies, comprising the use of a monoclonal antibody or fragment according to claim 17.

39. A method of producing a vaccinal composition, comprising a protein obtained by the method of claim 38, and a physiologically acceptable excipient.
